

AMENDMENTS TO THE CLAIMS

1-38. (canceled).

39. (currently amended) A connection system for use in a bone fixation device, comprising:
a first bone coupling assembly adapted to be secured to a first vertebrae;
a rod comprising:

a rigid first end portion including a surface received at least partially ~~within~~ by and coupled to the first bone coupling assembly;

a rigid second end portion;

a longitudinal flexible, substantially inelastic member located between the first end portion and the second end portion, fixably coupled to the first end portion, and fixably coupled to the second end portion; and

a rigid spacer located between the first and second ends portions and circumferentially disposed about the longitudinal flexible, substantially inelastic member;

a second bone coupling assembly coupled to the rod at a location other than the first end portion and adapted to be secured to a second vertebrae, the second vertebra adjacent to the first vertebrae,

wherein the first and second ends portions ~~directly substantially~~ limit motion of the rigid spacer ~~about~~ along the longitudinal flexible, substantially inelastic member and the rigid spacer limits the minimum distance between the first vertebrae and the second vertebrae when the rod is coupled to the first vertebrae and the second, adjacent vertebrae via the first bone coupling assembly and the second bone coupling assembly.

40. (currently amended) The connection system of claim 39, wherein ~~said~~ the rigid spacer further comprises a male interlocking member and a female interlocking cavity each configured to structurally interlock with a corresponding female interlocking cavity and male interlocking member, respectively, of one of an adjacent rigid spacer and an adjacent end portion located on opposite sides of the rigid spacer, two adjacent rigid spacers located on opposite sides of the rigid spacer, and two adjacent end portions located on opposite sides of the rigid spacer.

41. (currently amended) The connection system of claim 39, wherein said longitudinal flexible, substantially inelastic member comprises at least one of a metal wire comprising a plurality of metal yarns and a braided metal wire structure comprising a plurality of interwoven metal wires.

42. (currently amended) The connection system of claim 39, ~~further comprising a~~ wherein the second bone coupling assembly is connected to the second end portion ~~rod at a different location than the first bone coupling assembly and wherein the first and second bone securing assemblies are capable of securing~~ secure the rod at least partially between the exterior of a first vertebra and a second vertebra such that the connection system limits movement of the first vertebra relative to the second vertebra.

43. (canceled).

44. (currently amended) The connection system of claim 39, wherein said spacer comprises one of a metal-synthetic hybrid spacer and a biocompatible metal spacer.

45. (currently amended): The connection system of claim 39, ~~wherein said spacer comprises a metal-synthetic hybrid spacer~~ further comprising a second spacer located between one of the first end portion and the rigid spacer and the second end portion and the rigid spacer and circumferentially disposed about the longitudinal flexible, substantially inelastic member, and wherein the rigid spacer and the second spacer limit the minimum distance between the first vertebrae and the second vertebrae when the rod is coupled to the first vertebrae and the second, adjacent vertebrae via the first bone coupling assembly and the second bone coupling assembly.

46. (currently amended) A connection system, comprising:

a rod comprising:

a rigid first element;

a rigid second element;

a flexible, substantially inelastic longitudinal element located between the first element and the second element and fixably coupled to one of the first element and the second element; and

a rigid third element located between the first and second elements and circumferentially disposed about the longitudinal element;

a first bone coupling assembly connected to the rod, the first bone coupling assembly adapted to secure ~~securing~~ the rod to a ~~bone structure~~ first vertebrae of a patient;

a second bone coupling assembly connected to the rod at a different location than the first bone coupling assembly, the second bone coupling assembly adapted to secure ~~securing~~ the rod to a ~~bone structure~~ second vertebrae, the second vertebra adjacent to the first vertebrae of the patient ~~at a different location from the first coupling assembly~~;

wherein ~~the first and second elements substantially limit motion of the third element in a longitudinal direction about the longitudinal element~~ the third element limits the minimum distance between the first vertebrae and the second, adjacent vertebrae when the rod is coupled to the first vertebrae and the second vertebrae via the first bone coupling assembly and the second bone coupling assembly.

47. (currently amended): The connection system of claim 46 wherein the flexible, substantially inelastic longitudinal element comprises one of a wire and a braided wire.

48. (currently amended): The connection system of claim 46 wherein the ~~longitudinal element comprises a braided wire~~ first and the second elements each have an outer diameter that is greater than an inner diameter of the third element.

49. (currently amended): The connection system of claim 46 wherein said third element comprises one of a biocompatible metal spacer, a metal-synthetic hybrid spacer, and a synthetic spacer.

50. (currently amended): The connection system of claim 46, wherein ~~said third element comprises a metal-synthetic hybrid spacer~~ the second bone coupling assembly is connected to the second element.

51. (currently amended): The connection system of claim 46, ~~wherein said third element comprises a synthetic spacer~~ further comprising a fourth element located between one of the first element and the third element and the second element and the third element and circumferentially disposed about the flexible, substantially inelastic longitudinal member, and wherein the third element and the fourth element limit the minimum distance between the first vertebrae and the second vertebrae when the rod is coupled to the first vertebrae and the second, adjacent vertebrae via the first bone coupling assembly and the second bone coupling assembly.

52-57 (Cancelled).

58. (currently amended) The connection system of claim 39 wherein the ~~longitudinal member~~ rigid spacer and at least one of the first and second end portion ~~are a monolith~~ have a substantially similar outer diameter.

59. (currently amended) The connection system of claim 39 wherein the first and second end portions each have ~~a cross-sectional area~~ an outer diameter that is greater than ~~a cross-sectional area of the longitudinal member~~ an inner diameter of the rigid spacer.

60. (currently amended) The connection system of claim 39, wherein the first and second end portions each have an outer circumference that is ~~greater than~~ substantially similar to a circumference of the ~~longitudinal member~~ rigid spacer.

61. (currently amended) The connection system of claim 46 wherein the longitudinal member third element and at least one of the first and second elements ~~are a monolith~~ have a substantially similar outer diameter.

62. Cancelled.